

Abstract of the Disclosure

A system and method for allocating sources to channels is provided. Multiple sources provide input signals to be transferred to the channels. Storage units associated with the channels store source identification information for each of the sources that transfer input signals to the channels. Selection circuit selectively pass one of the plurality of input signals from a respective one of the plurality of sources according to a state of a respective control input to the selection circuit, the control input for each selection circuit being determined based on the source identification information of a source associated with the selection circuit. A checking circuit checks outputs of the selection circuits and forwards passed input signals to the channel, such that the input channels are forwarded to the channel according to the priorities associated with the sources. The invention for allocating multiple sources to multiple channels can be applied to a direct memory access (DMA) controller.

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